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PREPARATION A SERIES OF ATROPISOMERIC BIPY-DIOXIDES BY OXIDATIVE COUPLING AND THEIR APPLICATION IN ASYMMETRIC CATALYSIS

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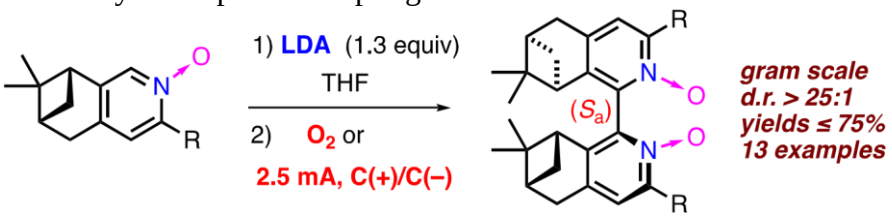
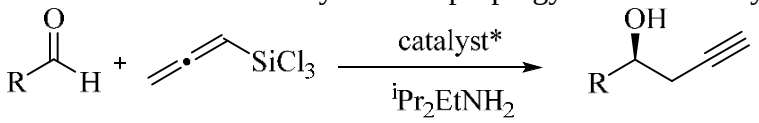
Abstract. Chiral bipyridine-N,N'-dioxides are well-known as highly efficient Lewis-base ligands, which catalyzed a vast range of reactions with high enantioselectivity. But their direct synthesis still remains challenging because of the necessity of preservation both N-oxide groups along with good enantioselectivity at the part of coupling.



Herein we report about new method for coupling pyridine-N-oxides proceeding in mild reaction conditions with great stereoselectivity [1].

It is well established that chiral bipy-dioxides are highly efficient catalysts for asymmetric allylation of aldehydes with allyltrichlorosilanes [2]. At this point we decided to drew our attention on the much less-studied reaction of asymmetric propargylation of aldehydes with allenyltrichlorosilane.



The procedure and applicability of both coupling method and the asymmetric propargylation reaction will be discussed.

References

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